18(7), 25(1) POL/43-59-4-3/23

AUTHORS: Krzanowski, Andrzej, and Stegenta, Boleslaw, Engineers

TITLE: Carbon and Alloy Tool-Steels

PERIODICAL: Wiadomosci Hutnicze, 1959, Nr 4, pp 114-117 (Poland)

ABSTRACT: The article describes the characteristics of carbonated and casting tool-steels for cold and hot working. The carbonated tool-steels have most simple chemical structures. For high-quality tools, steel containing an appropriate amount of carbonate, sulphur and manganese is used. For tools that have to be ductile to a certain degree, steel Standards N6E and N86 are taken; for wear-resisting tools the carbonated, plain tempered steel of the Standards N9E, N11E, N12E and N13E are used. The tempering capacity of the tool-steel is tested by samples in the size of 25 x 25 mm by heat treatment at temperatures of 760°, 800°, 840° and 880°C. (Table 1). Tool-steels for casting are

Card 1/2

classified into (1) steels for cold working (NC10, NC11, NC6, NWC, NCWV) and (2) steels for warm working. The main components of tool-steels for casting are chromium, tungsten, molybdenum and vanadium. Table 2 shows the most frequent defects of tools occurring during heat treatment. There are 2 tables.

POL/43-59-5-5/28

18(5,7)
AUTHOR: Krzanowski, A., and Stegenda, B., Engineers

TITLE: High Speed Steels

PERIODICAL: Wiadomosci Hutnicze, 1959, Nr 5, pp 151-154 (Poland)

ABSTRACT: This article describes in detail the working of high speed steels, their plastic hot and cold transformation, their forging, annealing, hardening and tempering. The main quality of high speed steels is that the cutting tools, manufactured out of them, keep their hardness to a temperature of 600°C, maintaining an edge, even though red hot. Hence, they are called "high speed" or "quick cutting" steels. The elements employed to develop the properties of high speed steels are: tungsten, chromium, molybdenum vanadium and cobalt. To develop the most desirable properties in the steel, the segregates must be uniformly distributed and well scattered and careful control must be kept of melting and casting practice and subsequent forging and rolling operations. Heating for forging

Card 1/3

High Speed Steels

should be done slowly and gradually, for if a cold bar is placed in a hot furnace, it is liable to be overstrained by unequalized expansion. After forging and machining, high speed steel should be annealed before it is hardened. The temperature of high speed steels must neutralize the inner tension of the steel structure. It is based on the heating of the hardened steel to a temperature of 560-600°C (the temperature itself depends on the kind of steel and the form of the tool) and cooled very slowly in calm air. This is to be repeated severated times. The hardness, developed by this operation, is known as secondary hardness. Good results have been obtained by tempering in steam, at a temperature of 300-500°C, in 20 minutes. The tools, thus tempered, are twice as sharp and have a better look. On the surface, there is a thin layer of Fe_3O_4, which gives the tools an esthetic looking blue hue. Due to the bad thermal conductivity of the high speed steels, the cutting of the tools has to be carried out very cautiously, and absolute cleanness of the wheels has to be maintained.

Card 2/3

POL/43-59-5-5/28

High Speed Steels

In order to improve the cutting efficiency of the tools, they have to be treated 20-30 minutes in a sodium-cyanide bath, the temperature of which is lower than the tempering temperature, by 10-20°C. There are 2 graphs and 1 table.

✓

Card 3/3

STEGENTA, Boleslaw, mgr inz.

The Leipzig Spring Fair in 1959. Wiad hut 15 no.5:158-161 My '59.

KRZANOWSKI, Andrzej, mgr inz.; STEGENTA, Boleslaw, mgr inz.

Production materials for durable magnets. Wiad hut 15 no.7/8:218-220 Jl-Ag '59.

STEGENTA, Boleslaw, mgr inz.

Conservation, packing, and delivery of drawn materials, the priority problem for producer and receiver. Wiad hut 15 no.10:318 O '59.

STEGENTA, Boleslaw, mgr.,inz.; ZAJCSZ, Hugon, inz.

Spring steel. Wiad hut 18 no.1:12-16 '62.

STEGER, Ferenc, okleveles gepeszmernok, vezeto-tervezo

Endurance tests for railroad diesel engines. Jarmu mezo gep 10 no. 10:361-367 O '63.

1. Ganz-Mavag Motorgyartas.

STEGER, Tibor

An illustrated account of the Telephone Factory exhibition.
Radiotechnika 15 no.6:3 of cover Je '65.

YUGOSLAVIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81714.

Author : Verkade P., Stegerhoek L., Mostert-Pzn S.
Inst :
Title : The Utilization of Silver Salts of Phenylbenzyl Phosphoric Acid for the Synthesis of the Monophenyl Ester of Phosphatides (Previous Communication).

Orig Pub: Croat chem acta, 1957, 29, No 3-4, 413-517.

Abstract: The preparation of ROP(O)(CH)(OC_6H_5) (I) here and later, of R = $CH_2CH_2OOCC_{21}H_{43}$) is described. From $(C_6H_5CH_2O)_2P(O)$ and SO_2Cl_2 - $(C_6H_5CH_2O)$ POCl is synthesized from which by the reaction with C_6H_5ONa, $(C_6H_5CH_2O)_2P(O)(OC_6H_5)$ was obtained, which by boiling with NaI in acetone gives the salt $(C_6H_5CH_2O)(C_6H_5O)$

Card : 1/3

STEGINSKY, Bernard

POLAND

STEGINSKY, Bernard

Battelle Memorial Institute, Columbus, Ohio

Archiwum, Postepy Fizyki, No 4, 1963, pp 445-53.

"Dynamics of Ionized Gases".

STEGLIK, Josef., master radiolyubitel'skogo sporta.

Czhechoslovak radio amateurs. Radio no.10:17 O'55. (MLRA 9:1)
(Czechoslovakia--Amateur radio stations)

STEGLIK, V.

SILIN, P. professor

"Fundamentals of Sugar Production". M.Drakhovskaya, V. Steglik, and K. Shandera. Reviewed by Silin. Sakh. prom. 30 no 5:78-79 My '56 (Sugar industry) (Drakhovskaya, M.) (Steglik, V. Shandrra, K.(MLRA 9:9)

STEGMAN, B.K.

Papers submitted for the 10th Pacific Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

SKOPINTSEV, B. A., Marine Hydrophysics Institute, Academy of Sciences USSR - "Investigation into mineralization of organic substances of dead plankton under anaerobic conditions" (Section VII.C.1)

SMETANIN, D. A., Institute of Oceanology - "Some regularities concerning the zonal distribution of chemical characteristics in the waters of the central part of the Pacific" (Section VII.C.1)

SOKOLOV, S. A., All-Union Scientific Research Institute of Marine Fishing and Oceanography - "Submarine 'Severyanka' - a new means for marine fishery investigations" (Section III.C.4)

SOKOLOVA, M. N., Institute of Oceanology - "The distribution of deep-sea biocoenosis in the Pacific in connection with food conditions" (Section III.C)

SOROKIN, Yu. N., Institute of Biology of Reservoirs, Academy of Sciences USSR - "The submarine illumination and the primary production of photosynthesis in the sea" (Section III.C.4)

STEGMAN, B. K., Institute of Biology of Reservoirs, Academy of Sciences USSR - "The problem of Beringian continental connection in the ornithogeographic elucidation" (Section III.A.8.a)

SYSOYEV, N. N., and SHIPEY, V. A., Institute of Oceanology - "The measurement of deep oceanic currents with the application of anchor buoys (methods, apparatus, results)"(Section VII.B.5)

TAREYEV, B. A., and FOMICHEV, A. V., Institute of Oceanology - "Geostrophic currents in the Antarctic sector of the Pacific" (Section VII.D.1)

TIKHONOV, V. I., Institute of Geology - "New data on the tectonics of southern Kamchatka" (Section VII.C)

TUMARKIN, D. D., Institute of Ethnology - "The ethnologic study of the peoples of Oceania in the USSR" (Section II.B)

UDINTSEV, G. B., Institute of Oceanology - "Features of evolution in the bottom topography of the Pacific Ocean" (Section VII.C.1)

VAKHRAMEYEV, V. A., Institute of Geology - "Cretaceous floras of the Pacific coast in the USSR as a basis for the subdivision of continental deposits of this age" (Section VII.C)

VINOGRADOVA, N. G., Institute of Oceanology - "Geographical distribution of abyssal bottom fauna and the problem of vertical zonation" (Section III.C)

VITVITSKIY, G. N., Moscow State University, Geographical Faculty - "On the nature of the summer monsoon in east Asia" (Section VI.C)

VLASOV, G. M., Institute of Geology - "The island arches and the peripheric folded areas in the western belt of the Pacific belt" (Section VII.C)

YANOVSKAYA, T. B., and KEYLIS-BOROK, V. I., Institute of Earth Physics imeni O. Yu. Schmidt - "Some possibilities in interpretation of surface waves of the Pacific" (Section VII.C.2)

YANSHIN, A. L., Institute of Geology - "The tectonic map of Eurasia" (Section VII.C)

YATSENKO-KHMELEVSKIY, Andrey A., The Leningrad Forestry Engineering Academy imeni S. M. Korov - "Some problems involved with wood studies in southeast Asia" (Section III.A.7)

YEFREMOV, Yu. K., Asst. Director, Geographical Museum, Moscow State University - "The physico-geographical zonation of the Sakhalin and the Kuril Islands" (Section VI.D)

ZAKLINSKAYA, Ye. D., Institute of Geology - "On the relations between the Upper Cretaceous and Paleogene floras of Australia, New Zealand, and Eurasia" (Section III.A)

ZENKEVICH, L. A., and FILATOVA, Z. A., Institute of Oceanology - "General regularities in the quantitative and qualitative distribution of the bottom fauna in the Pacific" (Section III.C)

ZHAROVA, T. V., and KERZINA, N. N., Institute of Zoology - "The comparative study in methods of primary production investigation of fresh-water plankton" (Section III.C)

ZHIRMUNSKIY, A. V., Institute of Cytology - "Cytophysiological investigation of temperature adaptations of invertebrates in the northwestern area of the Pacific Ocean" (Section III.C)

ZHIVAGO, A. V., Institute of Geography - "Outlines of southern ocean geomorphology" (Section VII.D.1)

STEGMAN, Boris, Institute of Zoology. Invited to give paper in the session of Bering Arc Relationships of Symposium on Pacific Basin Biogeography (Section VI.E.3.a)

STEGMAN, KAZIMIERZ.

STEGMAN, KAZIMIERZ. Kultura stawu rybnego. Warszawa, Panstwowe Wydawn. Rolnicze i Lesne, 1952. 87 p. (Pondfish culture) DA Not in DLC

AGRICULTURE
Poland

So: East European Accession, Vol. 6, No. 5, May 1957

STEGMAN, Kazimierz

Selection of carp spawners on Poland's fish farms. Postepy nauk roln 10 no.4:109-113 Jl-Ag '63.

1. Katedra Rybactwa, Szkola Glowna Gospodarstwa Wiejskiego, Warszawa.

STEGMANN, G.

"Principle and Control of Flow Meters Working on Differential Manometers", P. 267. (TECHNICKA PRACA, Vol. 6, No. 5, May 1954, Bratislava, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

STEGMANN, G.

Production of half cellulose

p. 63
Vol. 10, no. 4, Apr. 1955
PAPIR A CELULOSA
Praha, Czechoslovakia

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, no.2
February 1956, Uncl.

[redacted], G.

"Some figures on the Finnish cellulose-paper industry."

[redacted], Praha, Czechoslovakia. Vol. 10, no. 9, Aug. 1956.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclas

STYSMANN, S.

"New automatic mobile irrigation unit, a new technique in plant production."

P. (4) of cover. (Ministerstvo zemedelstvi --Praha, Czechoslovaka.) Vol. 8, no. 1, Jan. 1958

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

L 13312-63 EPF(n)-2/EWT(m)/BDS AFFTC/ASD/AFWL/SSD Pu-4

G/025/63/006/003/006/007 60 59

AUTHOR: Siewert, G., and Stegmenn, H.

TITLE: Approximating calculations for an irradiation istallation with simplified radiation shielding /9

PERIODICAL: Kernenergie, v. 6, no 3, Mar 1962, 124-130

TEXT: The calculations presented demonstrated that it is possible to approximate by relatively simple means the strength of radiation field surrounding an irradiation installation of known dimensions if the composition of the materials used is known. The calculated results correlated satisfactorily with data obtained by actual measurements around an installation housing a 2000-curie cobalt-60 source (which was used as an example to illustrate the calcualting procedures involved). The individual steps in the calculations include the determination of the locations for which the prevailing dosage should be calculated; estimation of direct radiation penetrating the roof; estimation of the radiation reflected from the floor and the walls; calculation of total flux, its apparent activity, and scattered radiation at the roof-top; estimation of weakening in radiation through the roof; and calculation of the scattered radiation in the area surrounding the entire installations.

Card 1/2/

Association: Peope-Owned Enterprise for the Development and Planning of Nuclear-Technological Installations.

STEGMANN, Gustav, doc., inz.

Determination of the characteristic dimension of segmental orifice plates. Energetika Cz 13 no.5:240-243 My '63.

1. Slovenska vysoka skola technicka, Bratislava.

STEGMANN, Gustav, doc., inz.

Economic importance of regenerative boilers and summary of the experience acquired in Czechoslovakia and abroad. Energetika Cz 13 no.6:303-306 Je '63.

1. Slovenska vysoka skola technicka, Bratislava.

STEGMANN, Gustav, doc., inz.

Use of sulfite waste liquor from cellulose production as fuel. Tech praca 15 no.11:888-891 N'63.

1. Slovenska vysoka skola technicka, Bratislava.

STEGMANN, Gustav, doc., inz.

Flow measurement of liquids containing sedimentation sludge. Papir a celulosa 18 no.4:89-90 Ap '63.

1. Slovenska vysoka skola techniqka, Bratislava.

STEGMANN, Gustav, doc. inz.

Methods of calculating universal combustion triangles. Energetika Cz 14 no.8:381-385 Ag '64

1. Slovak Higher School of Technology, Bratislava.

L 31752-66 EWP(k)/T-2/EWP(w)/EWP(v) IJP(c) WW/EM

ACC NR: AP6021663 SOURCE CODE: CZ/0032/65/015/008/0575/0581

AUTHOR: Stegmann, G. (Doctor; Engineer) 67 B

ORG: Slovak Institute of Technology, Bratislava (Slovenska vysoka skola technicka)

TITLE: Calculation of the optimum arrangement of nozzles for boilers operating on waste sulfate liquor

SOURCE: Strojirenstvi, v. 15, no. 8, 1965, 575-581

TOPIC TAGS: steam boiler, nozzle design, fuel nozzle, combustion

ABSTRACT: The article briefly outlines specific phenomena characterizing the combustion process in steam boilers operating on black sulfate liquor. Then with a simplified physical model a determination is made of the optimum height at which the injecting nozzles should be located. Several simplifying assumptions must be made on account of the complexity of the system, but nevertheless the conclusions indicate ways to improve the efficiency of regenerating boilers. The article was presented by Engineer J. Votoupal. Orig. art. has: 3 figures and 28 formulas. [JPRS]

SUB CODE: 13 / SUBM DATE: none / ORIG REF: 004 / SOV REF: 004

Card 1/1 UDC: 621.181.6:621.181.67/.68:621.18.001

VARDAY, Gyorgy, dr.; BICZOK, Imre; OCSVAR, Rezso; LANTOS, Zoltan; SZIMELY, Karoly; BERENYI, Akos, dr.; FEHER, Gyula; GALLI, Laszlo; BAKOS, Laszlo; CZIGLINA, Vilmos; GABOS, Gyorgy; SZILAGYI, Gyula; RONAI, Andras; KOVACS, Gyorgy; BACHMANN, Alfred; STEGMULLER, Jozsef; RETHATI, Laszlo; NAGY, Zoltan.

Hydrological questions of the construction industry in Hungary. Hidrologiai kozlony 36 no.3:169-170 Je'56.

1. "Hidrologiai Kozlony" szerkeszto bizottsagi tagja (for Galli).
2. "Hidrologiai Kozlony" felelos szerkesztoje (for Kovacs).

STEGNA, G.

"Results of the Mobilization of Plant Power Stations and the Regulation of the Power Supplied from the Network of the Ministry of Fuel and Power Industry to the Lumber, Pulp, and Paper Industries, in Slovakia," p. 9.
(Energetika, Vol.3, No.1, Jan. 1953, Praha.)

SO: Monthly List of East European Accessions, Vol.2, No.9, Library of Congress, September 1953, Uncl.

STEGNAR, Marjan

Prevention of rickets. Zdrav.vest., Ljubljana 24 no.3:91-93 1955.

1. Otroski oddelek splosne bolnisnice v Celju - sef Dr. Marjan Stegnar.
(RICKETS, prevention and control)

STEGNER A.

Bag-pmz

690. AN ANALYSIS OF A Λ^0-PARTICLE (DECAY) IN FLIGHT RECORDED IN NUCLEAR EMULSION. P. Ciok and A. Stegner. 539.18

Acta phys. Polon., Vol. 14, No. 1-2, 153-5 (1955).

A Λ^0-particle decay is analysed to obtain an accurate Q-value. The π^--meson was stopped and its energy therefore known. The momentum of the proton was determined from an analysis of two elastic p–p collisions. The final result is 35.2 ± 1.2 MeV.

D. J. Prowse

pmz

VAL'TER, A.K.; KOPANETS, Ye.G.; L'VOV, A.N.; STEGNER, A.; TSYTKO, S.P.

Study of the reaction $Mg^{26}(p,\gamma)$ Al^{27} at proton energies ranging from 1.8 to 2 Mev. Izv. AN SSSR. Ser. fiz. 27 no.11:1419-1426 N '63. (MIRA 16:11)

1. Fiziko-tekhnicheskiy institut AN UkrSSR. 2. Institut yadernykh issledovaniy, Varshava, Pol'skaya Narodnaya Respublika (for Stegner).

STEGNER, G. Cand Chem Sci -- (diss) "Mechanism and kinetics of the formation of coal during the decomposition of alcohols on catalyzers." Mos, 1959. 10 pp (Mos Order of Lenin and Order of Labor Red Banner State Univ im M. V. Lomonosov. Chair of Organic Catalysis), 150 copies (KL, 45-59, 144)

5.3000

78059
SOV/62-60-1-5/37

AUTHORS: Stegner, G., Balandin, A. A., Rudenko, A. P.

TITLE: Influence of Different Stages of Polycondensation of the Products of Catalytic Decomposition of Ethyl Alcohol on the Rate of Carbonization

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, Nr 1, pp 24-30 (USSR)

ABSTRACT: This is a continuation of the author's previous work (Izv. AN SSSR, Chem. Ed., 1959, 1896) on the mechanism of carbonization in the decomposition of ethyl alcohol over copper-silica. Experimental data presented in this paper confirm previous conclusions (see above reference) concerning the mechanism of carbonization which accompanies catalytic decomposition of ethyl alcohol. Carbonization is considered to be a multi-stage polycondensation of ethyl alcohol and the products of its catalytic decomposition. The so-called low temperature carbonization (below 600°) proceeds

Card 1/2

Influence of Different Stages of Polycondensation of the Products of Catalytic Decomposition of Ethyl Alcohol on the Rate of Carbonization

78059
SOV/62-60-1-5/37

through dehydrogenation of ethyl alcohol. Acceleration or slowing down of ethyl alcohol decomposition (dehydrogenation and dehydration) causes a change in the rate of carbonization. There are 4 figures; and 11 references, 1 German, 10 Soviet.

ASSOCIATION: M. V. Lomonosov Moscow State University (Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova)

SUBMITTED: May 4, 1958

Card 2/2

S/062/60/000/011/003/016
B013/B078

AUTHORS: Stegner, G., Rudenko, A. P., Balandin, A. A.

TITLE: Carbon Formation in the Decomposition of Isopropyl Alcohol, n-Hexyl Alcohol, and Cyclohexanol on the Copper - Silica Gel Catalyst

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 11, pp. 1930 - 1937

TEXT: A study has been made of the mechanisms of carbon formation in the decomposition of isopropyl and n-hexyl alcohols, as well as of cyclohexanol in the temperature range of 200 - 950°C, proceeding in the same manner as with ethyl alcohol (Refs.1,2). The experiments were conducted in a continuous system for heterogeneous catalytic studies at atmospheric pressure and a volume velocity of 2.25 h^{-1}. Fig.1 shows the temperature dependence of the carbon formation rate in the decomposition of the above-mentioned substances. The presence of three mechanisms can be inferred from the course of the curves. Diagrams are suggested for the three mechanisms: the low-temperature mechanism in the temperature

range of 200° - 600°C acts, like a pure polycondensation of aldehydes and ketones, according to the following scheme:

alcohol $\xrightarrow[\text{catalytic dehydrogenation}]{-H_2}$ aldehyde /ketone/ $\xrightarrow[\text{polycondensation}]{-H_2O}$ polycyclic saturated, unsaturated, and aromatic hydrocarbons and oxygen derivatives of different densities, up to carboids

This scheme is applicable to all alcohols concerned, including ethyl alcohol. The intermediate mechanism in the temperature range of 600° - 750°C is a polycondensation of products of the catalytic dehydration of alcohols (propylene, hexylene, cyclohexene). Possibly, a polycondensation of ethylene takes place likewise under these conditions, but since the rate of this process is too low, it occurs only at higher temperatures, in the course of the high-temperature mechanism. The following scheme is offered for the intermediate mechanism:

Carbon Formation in the Decomposition of Isopropyl Alcohol, n-Hexyl Alcohol, and Cyclohexanol on the Copper - Silica Gel Catalyst

S/062/60/000/011/003/016
B013/B078

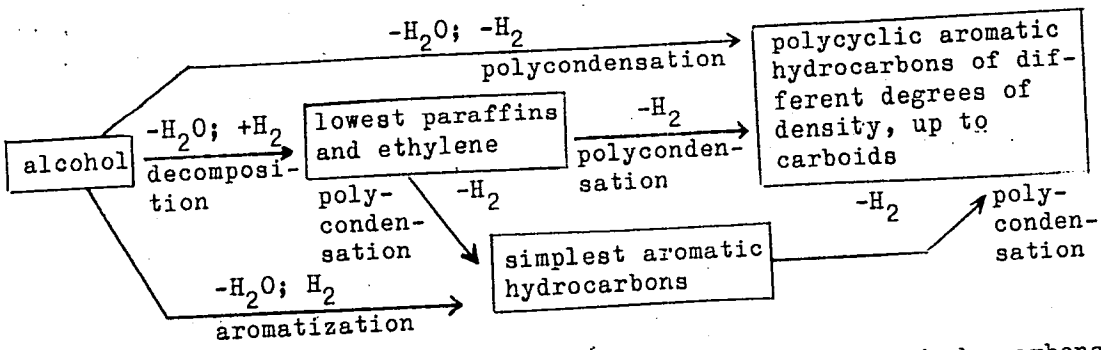
alcohol $\xrightarrow[\text{catalytic dehydrogenation}]{-H_2O}$ olefins $\xrightarrow[\text{polycondensation}]{-H_2 \text{ etc.}}$ polycyclic saturated, unsaturated, and aromatic hydrocarbons of different density degrees, up to carboids

The replacement of the intermediate mechanism by the high-temperature mechanism manifests itself by a marked retardation of the process at temperatures above 750°C. In the range of 750° - 875° the carbon formation is slowed down, after which it is again speeded up vigorously beyond 875°C. This mechanism (750° - 950°C) comprises the following processes: polycondensation of decomposition products of the alcohols used (lowest paraffins and ethylene); polycondensation of aromatic hydrocarbons, resulting from the decomposition of alcohols; polycondensation of the alcohols used. A general scheme applies to them:

Card 3/5

Carbon Formation in the Decomposition of Isopropyl Alcohol, n-Hexyl Alcohol, and Cyclohexanol on the Copper - Silica Gel Catalyst

S/062/60/000/011/003/016
B013/B078



As opposed to the two first-mentioned mechanisms, aromatic hydrocarbons only are given here as the end products. This is explained by the fact that under the conditions of the high-temperature mechanism the formation of saturated, unsaturated, and hydroaromatic polycyclic systems is practically impossible, which is indicated by the composition of

Card 4/5

Carbon Formation in the Decomposition of Isopropyl Alcohol, n-Hexyl Alcohol, and Cyclohexanol on the Copper - Silica Gel Catalyst

S/062/60/000/011/003/016
B013/B078

resinous polycondensation products. Their composition and aromatic character is almost the same in all of the alcohols investigated. Table 1 gives the composition of gaseous decomposition products of the alcohols on the copper - silica gel catalyst. The composition of the hydrocarbon part of the gaseous decomposition products of isopropyl and n-hexyl alcohols on the copper - silica gel catalyst is given in Table 2.There are 4 figures, 2 tables, and 4 references: 3 Soviet and 1 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: June 29, 1959

Card 5/5

BALANDIN, A.A.; RUDENKO, A.P.; STEGNER, G.

Formation of coal dendrites in the course of decomposition of alcohols on nickel. Ozv.AN SSSR.Otd.khim.nauk no.5:762-770 My '61. (MIRA 14:5)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Alcohols) (Coal)

STEGNER, H.

Acetone from Acetylene and Water, Part II by K. MARCZEWSKA, H. STEGNER J. ROSZKOWICZ and E. TRESZCZANOWICZ, Page 463, Przemysl Chemiczny, No. 8, 1957.

Stegner, H.

Acetone from acetylene and steam. I. K. Marczewska, J. Musierowicz, H. Stegner, and E. Treszczanowicz. Inst. Chem. Ogólnej, Warsaw. *Przemysł. Chem.* 13, 103–10 (1957)(English summary).—A pilot-plant installation is described for the synthesis of acetone from dil. C_2H_2 based on the method used at Oppau, Germany. C_2H_2 is obtained from partial burning of methane which is a cheap raw material in Poland. A full-scale plant working on this method was recently constructed in Hungary. The empirical equation for the synthesis is: $C_2H_2 + 1.41\ H_2O \rightarrow 0.47\ CH_3CO\text{-}CH_3 + 0.06\ CH_3CHO + 0.41\ CO_2 + 0.07\ CO + 0.90\ H_2$. The reaction is exothermic and is carried out with 10-fold excess of steam at 450°. In order to prevent polymerization of C_2H_2 the temp. on the catalyst should not exceed 500°. A catalyst was prepd. by mixing 1 part of contact mass used for the conversion of water gas with 3 parts of ZnO (Zn white). The compn. of the mixt. was: Zn 60, Fe 14, and Cr 1.3% by wt.; it was pelleted to 8 mm. diam. × 6 mm., bulk d. before activation 1.68, after activation 1.62, and, after using them for 50 hrs., 1.99 g./cc. The activation

STEGNER, Halina

Obtaining tetrachloroethylene from carbon tetrachloride.
Przem chem 42 no.6:306-309 Je '63.

1. Zaklad Syntezy Kontaktowej, Instytut Chemii Ogolnej, Warszawa.

[illegible] B, M.

"Installation of Steam Heating in a Bus", p. 214, ([illegible]), Vol. 4, No. 10, October 1974, Warsaw, Poland)

[illegible]: Monthly List of East European Accessions (EEAI), LC, Vol. 7, No. 3, March 1976, Incl.

STEGNER, Z., mgr inz.

Current information concerning patents. Techn motor 12 no. 4/5: 144-146 Ap-My '62.

1. Biuro Instrukcyjne Przemyslu Motoryzacyjnego, Warszawa.

USSR

NAVAKATIKYAN, A. O., kand. med. nauk; LYUBOMUDROV, V. Ye., kand. med. nauk; SHCHERBAKOVA, O. I.; PAVLOVA, O. A.; BASAMYGINA, L. Ya.; STEGNIY, A. S. (Donetsk)

Evaluation of the arterial pressure in workers of certain professions. Vrach. delo no.7:136 Jl '62. (MIRA 15:7)

1. Laboratoriya klinicheskoy fiziologii (zav. - kand. med. nauk A. O. Navakatikyan) i otdel professional'nykh zabolevaniy (ispolnyayushchiy obyazannosti zaveduyushchego - kand. med. nauk V. O. Lyubomudrov) instituta fiziologii truda i kafedra fakul'tetskoy terapii II (zav. - dotsent N. S. Kamenetskiy) meditsinskogo instituta.

(BLOOD PRESSURE)

STEGNIY, A. Ye.

Stegniy, A. Ye. - "On the problem of physiotherapy in the treatment of ulcers from stumps," Uchen. zapiski (Ukr. nauch.-issled. in-t protezirovaniya), Issue 1, 1948, p. 79-90, - Bibliog: 11 items

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

[illegible]

[illegible] (MIRA 15:4)

STEGR, Jar.

STEGR, Jar., Dent. (Praha)

Technic of roentgenography. Prakt. sub. lek., Praha 2 no.4: 83-94 1954.
(TEETH, radiography, technic)

STEGUMIN, S.I.

Courses for public health organizers in Kuybyshev. Zdrav.Ros. Fed. 2 no.9:44-45 S'58 (MIRA 11:10)
(KUYBYSHEV--PUBLIC HEALTH)

STROGIN, S.I., Cand Med Sci -- (Kiev) "History of the Kuybyshev Medical Institute in connection with the development of higher medical education in the USSR." Kuybyshev, 1958. 38 pp (Kuybyshev State Med Inst. Chair of Organization of Public Health and History of Medicine). 250 copies List of author's works pp 37-38 (10 titles) (RI,40-59, 105)

YEROSHEVSKIY, T.I., prof.; STEGUNIN, S.I., assistent

Kuybyshev Medical Institute during the years of Soviet power. Trudy Kuib.med.inst. 11:3-12 '60. (MIRA 15:8)

1. Kafedra organizatsii zdravookhraneniya i istorii meditsiny Kuybyshevskogo meditsinskogo instituta (for Stegunin).
(KUYBYSHEV--MEDICAL COLLEGES)

STEGUNIN, S.I.

Nikolai Alekseevich Anan'ev; on the anniversary of his death. Sov. zdrav. 20 no.5:89 '61. (MIRA 14:5)
(ANAN'EV, NIKOLAI ALEKSEEVICH, 1901-1960)

ARTEMOV, P.I.; ZINOV'YEV, G.A.; STEGUNIN, S.I.(Kuybyshev)

Diseases of the circulatory organs among the population of Kuibyshev (as revealed by extensive study of disease incidence in 1958). Sov.zdrav. 21 no.8:47-50 '62. (MIRA 15:11)

1. Iz kafedry organizatsii zdravookhraneniya i istorii meditsiny (zav. - prof. I.M.Bulayev) Kuybyshevskogo meditsinskogo instituta.
(KUYBYSHEV--CARDIOVASCULAR SYSTEM--DISEASES)

ARTEMOV, P.I.; [illegible], S.I.

Basic problems of dispensary follow-up of patients. Sov. med. 28 no.4:127-129 Ap '64. (MIRA 17:12)

1. Kafedra organizatsii zdravookhraneniya i istorii meditsiny (zav. - dotsent S.I. Stegunin) Kuybyshevskogo meditsinskogo instituta.

SEBENDA, J.; STEHLICEK, J.;

Alkaline polymerization of 6-caprolactams. Pt.10. Coll Cz Chem 28 no.10:2731-2743 O '63.

STEHLICEK, J.; SEBENDA, J.; MICHLER, C.

Alkaline polymerization of ε-caprolactam. Pt.17. Coll Cz Chem 29 no.5:1236-1258 My '64.

1. Institute of Macromolecular Chemistry, Czechoslovak Academy of Sciences, Prague.

CZECHOSLOVAKIA

STEHLICEK, J; GEHRKE, K; SEBENDA, J

Institute of Macromolecular Chemistry, Czechoslovak Academy of Sciences, Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 1, January 1967, pp 370-381

"Alkaline polymerization of 6-caprolactam. Part 26: N-carbamoylcaprolactams as activators of the alkaline polymerization of caprolactam."

CZECHOSLOVAKIA

STEHLICEK, J; LABSKY, J; SEBENDA, J

Institute of Macromolecular Chemistry, Czechoslovak Academy of Sciences, Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 2, February 1967, pp 545-557

"Alkaline polymerization of 6-caprolactam. Part 25: The effect of structure of the acyl on polymerization activated by acylcaprolactams or diacylamines."

CZECH

A method for the determination of organically bound SO_3 in sulfonated oils. Antonín Stehlík and Boleslav Novařík (Leather & Allied Trades Research Inst., Otrokovice, Czech.). *Československo kožařství* 3; 56–7(1953).—Known methods (Hart, *C.A.* 28, 4250[4], Burton and Byrne, *C.A.* 41, 1117i) were tested. For isolation of sulfo esters: shake a weighed 1.5–3.0-g. sample with 20 ml. Et_2O and 20 ml. satd. NaCl soln. contg. 12 g. AcONa and 5 ml. AcOH per 250 ml. satd. NaCl soln. Drain, wash the ether layer with 20 ml. satd. NaCl soln., and evap. the ether. Add 20 ml. 0.1*N* NaOH and H_2O, evap., ignite for 15 min. with a small flame, wet with H_2O_2 (10%), evap., and ash at 500–50°. Titrate the ash against methyl red and methylene blue with 0.05*N* H_2SO_4. A crucible of stainless steel, but not of Pt, can be used. When only $CHOSO_2H$ groups are present, the results correspond to those of the gravimetric method. If $CHSO_3H$ groups are present, the results by the new method are higher, the increase corresponding to $CHSO_3H$ groups present; these can be calcd. from the difference. L. M.

Stehlik, Antonin

CZECH

The absorption of water by leather. Antonin Stehlik (Leather & Allied Trades Research I[redacted]Gottwaldov, Czech.). *Československá kožařství* 3, 34–5(1953).—The Kubelka-Němec method (*C.A.* 32, 6197[1]) of measuring the water absorption of leather is exact, but a considerable error may occur, if the H_2O content of the tested leather is not considered. The author recommends calcg. the H_2O absorption to 14% initial H_2O content. L. Masner

STEHLIK, ANTONIN

CZECH

Relation between the shake and filter bell methods of tannin analysis. Antonín Stehlík, M. Golšová, and B. Lačňáková (Leather [illegible] Trades Research Inst., Gottwaldov, Czech.). *Kožařství* 4, 105–7(1954).—The results can be calcd. according to the equation $T = T_1 + N_1[1 - (N/N_1)]$, in which T = tannin by the filter bell (I) method of analysis, N = nontannins by I, T_1 = tannin by the shake method (II), and N_1 = nontannins by II. The value N/N_1, characteristic for each tanning material, must be known and be const. These values have been detd. by the Czechoslovakian standard hide powder. Values $K = 1 - N/N_1$ and $K_1 = N_1/N$ have been detd. For quebracho ordinary, quebrac[illegible] sulfited, Syntar K₂D, Syntan SN₂₅, Kortan QU 1, Svitar[illegible] min ext.), spruce, chestnut, oakwood exts., and val[illegible] 0.7, 0.41, 1.62, 1.43, 0.59, 0.09, 0.20, 0.30, 0.24, [illegible] resp. K_1 is 0.41, 0.31, 0.62, 0.50, 0.37, (0.[illegible]0.17, [illegible] 0.78, and 0.50, resp. A table of results [illegible]

Stehlik, Antonin

New analytical methods in tanneries. Antonín Stehlík (Leather and Allied Trades Research Inst., Gottwaldov, Czech.). *Kožařství* 5, 35–7(1955).—In testing leather for permeability to air, Fodor's app. (from U.S.S.R.) gives more comparable results than does Bergmann's or Schopper's app. A hydrothermal test for the detn. of stability of vegetable-tanned leather has been introduced. A new method for the detn. of organically bound SO_3 in sulfated oils (*C.A.* 49, 8617*a*) gives better results if excess H_2SO_4 is added, CO_2 removed by boiling, and the soln. back-titrated. For detn. of sulfonyl chlorides the sample is burned in the Grote-Krekeler (*C.A.* 27, 1841) app., and the combustion products are absorbed in alk. H_2O_2 soln. The ratio of Cl to SO_3 is always higher than 1; hence Cl is also bound by addn. or substitution. The SO_2Cl content calcd. from $-SO_2Cl + 2KOH = -SO_3K + KCl + H_2O$ gives the same results as the polarographic detn. of Majranovskij and Nejmann (*C.A.* 46, 28*e*). For the polarographic detn. of sulfonyl chloride, cyclohexanone is a suitable solvent; the half-wave potential is near zero (to the calomel electrode). There is a linear relation between the concn. of sulfonyl chloride and the height of the wave, unless the proportion of solvents is changed.

L. Masner

STEHLIK, A.

70th anniversary of reclamation activity.

p. 213
Vol. 5, no. 6, June 1955
VODNI HOSPODARSTVI
Praha

SO: Monthly List of East European Accessions (EEAL), LC, Vol.5, no. 3
March 1956

CZECHOSLOVAKIA / Chemical Technology. Chemical Products and Their Application. Leather. Fur. Gelatin. Tanning Agents. Industrial Proteins. H-35

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 3364.

Author : Muller, K., Stehlik, A.
Inst : Not given.
Title : The Effect of Tanning Agents Blends Which Are Used in Czechoslovakia Upon the Tanning of Lower Part of Shoe Wear, and the Application of Some Less Frequently Used Methods For Their Determination.

Orig Pub: Veda a vyzk. v prumyslu kozedeln., 1956, 1, 7-26.

Abstract: The properties of natural tanning agents which are used in Czechoslovakian leather factories were investigated. The content of salts and weak acids, the degree of astringency were de-

Card 1/2

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application. Leather. Mechanical Gelatins. Tanning Materials. Technical Albumins. H-35

Abs Jour : Ref Zhur - Khimiya, No 17, 1958, 59699

Author : Stehlik Antonin, Kokes Drahoslav, Podolska Miroslava, Muck Eduard

Inst : -

Title : Determination of the Degree of Sulfitization of Vegetable Tanning Materials.

Orig Pub : Veda a vyzk. v prumyslu kozedeln., 1956, 2, 53-58

Abstract : The method is based on the determination:
1) of the quantity of free SO_2 (from sulfite or bisulfite) and
2) of the quantity of SO_2 connected with the tanning material. The method provides reproducible results and can be applied in any laboratory.

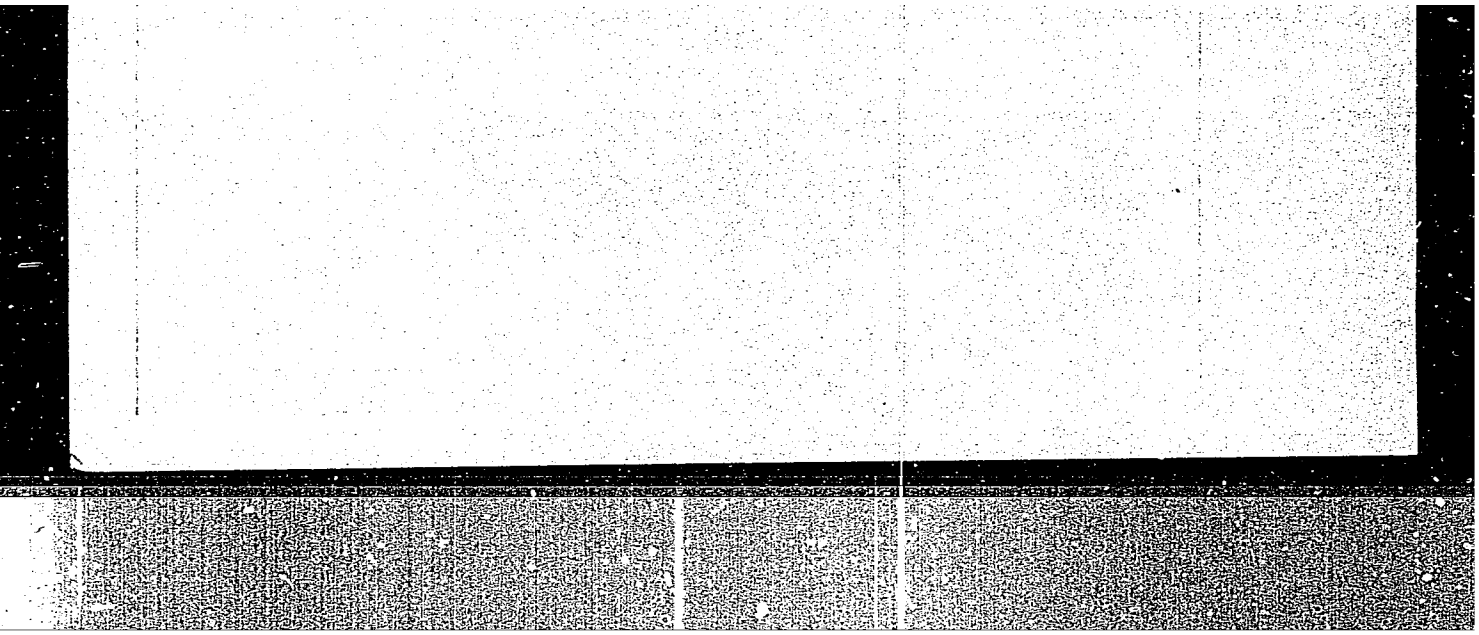
Card 1/1

Stehlik, A.

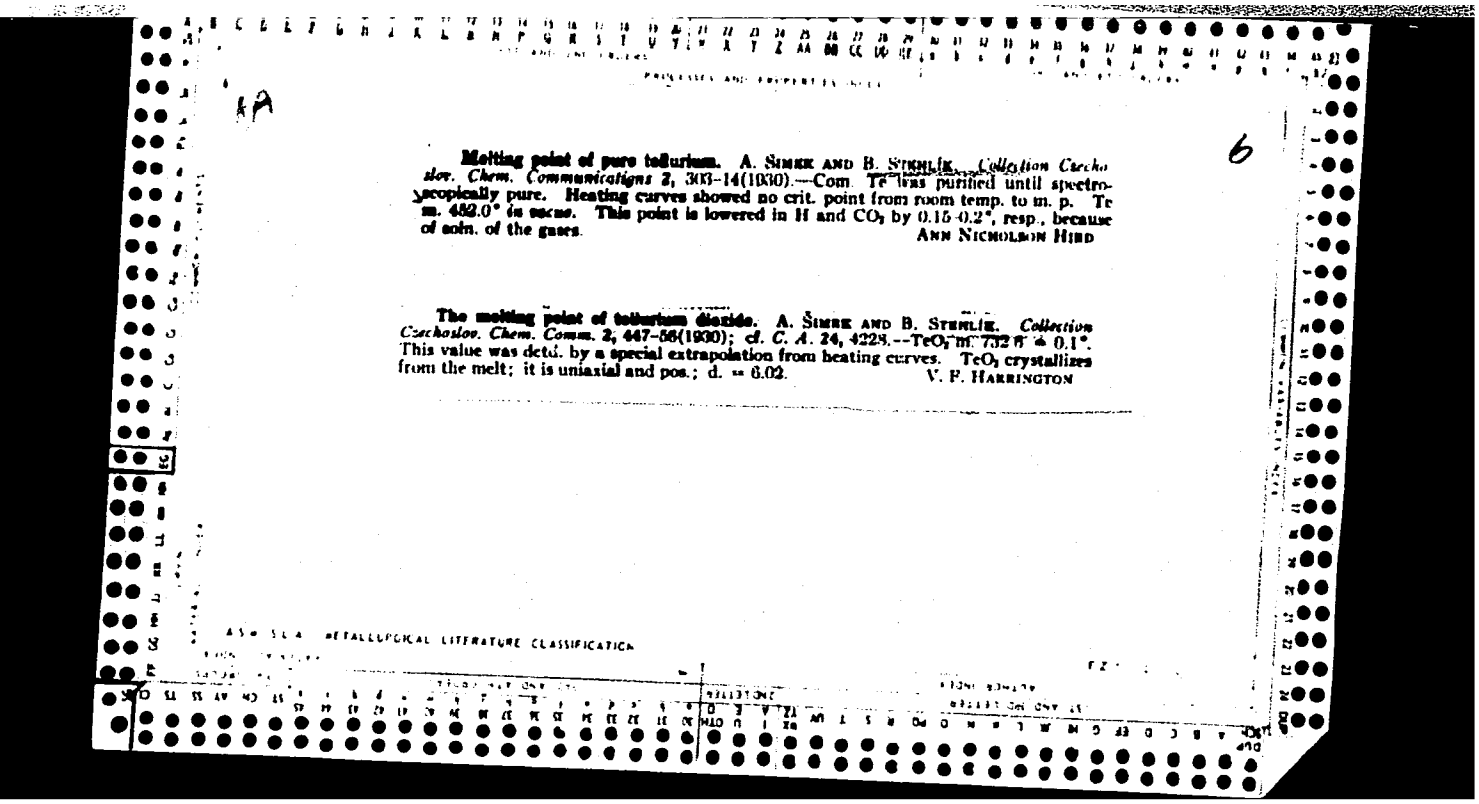
Direct volumetric determination of soluble sulfides. A. Stehlík and M. Ambrož (Výzkumný ústav kožedělný, Otrokovice, Czech.). *Chem. Listy* 50, 1320–1(1956).—S^{--} is detd. besides SO_3^{--} and $S_2O_3^{--}$ by complexometric titration with 0.05*N* $ZnSO_4$ and Eriochrome Black T (preferably A or B) as indicator. Max. deviations from the mean value were +1.6 and −1.9%. Fe^{++} and Mg^{++} interfere in amts. exceeding 3 and 0.2 mg., resp. L. J. Urbánek

2

6000

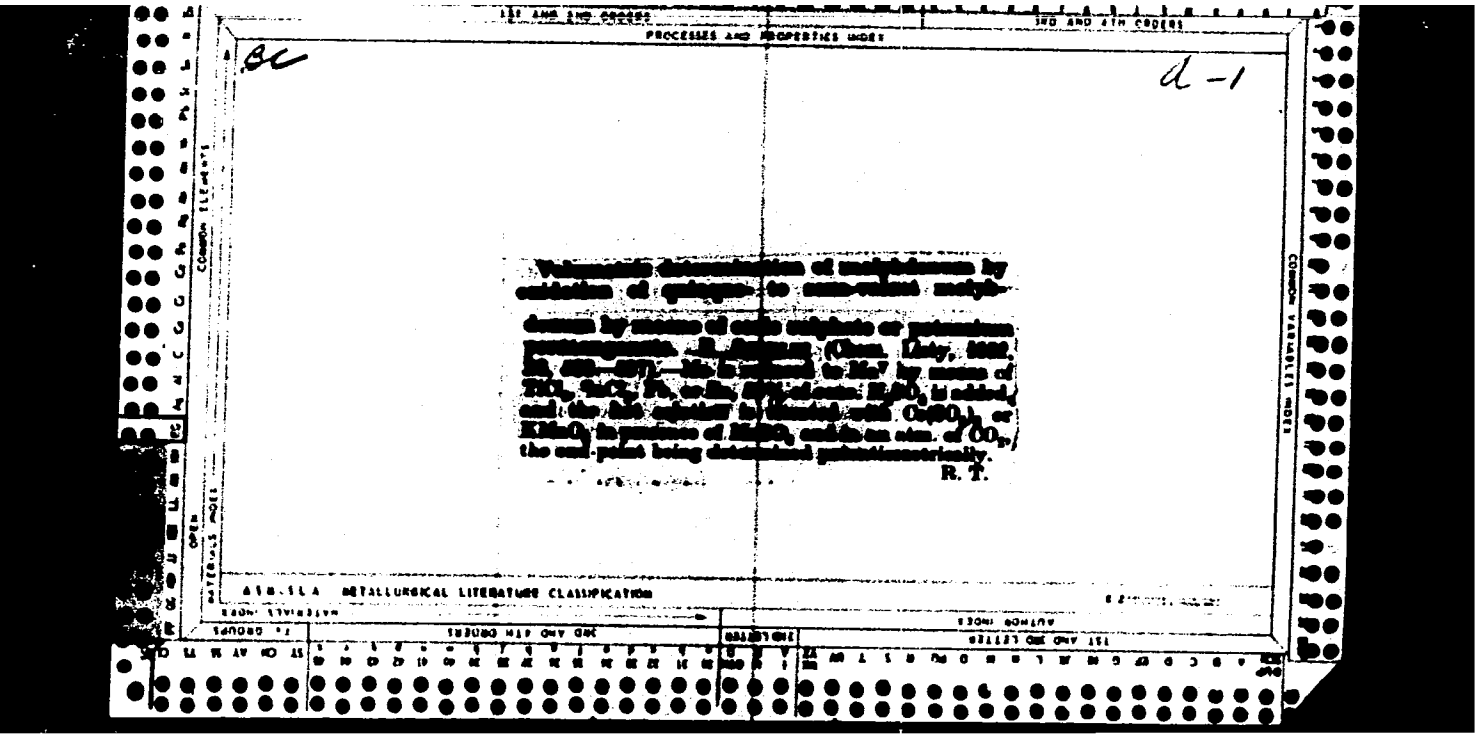


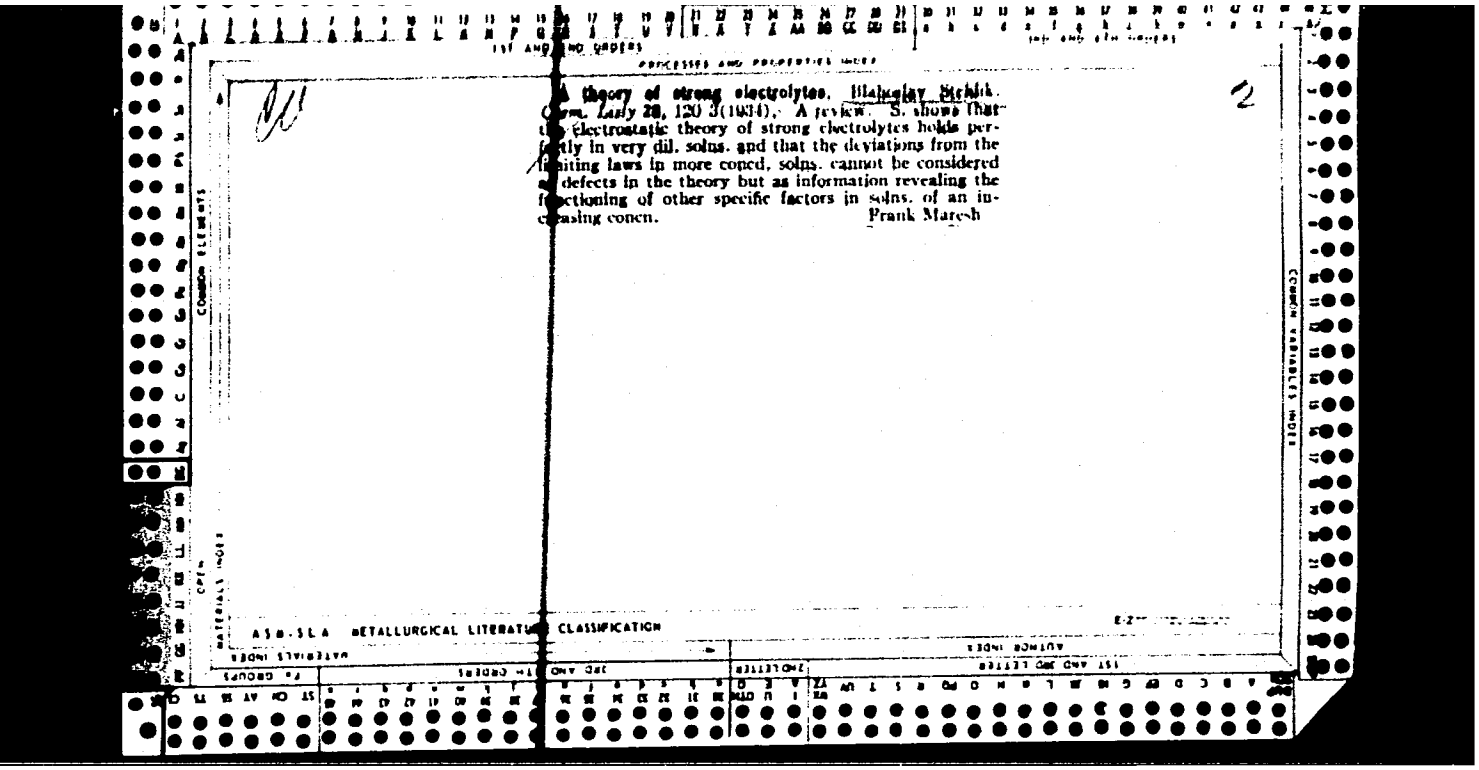
APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653110011-2"



Melting point of pure tellurium. A. Šimek and B. Stehlík. *Collection Czechoslov. Chem. Communications* **2**, 303–14(1930).—Com. Te was purified until spectroscopically pure. Heating curves showed no crit. point from room temp. to m. p. Te m. 452.0° in vacuo. This point is lowered in H and CO_2 by 0.15–0.2°, resp., because of soln. of the gases.
Ann Nicholson Hird

The melting point of tellurium dioxide. A. Šimek and B. Stehlík. *Collection Czechoslov. Chem. Comm.* **2**, 447–56(1930); *cf. C. A.* **24**, 4228.—TeO_2 m. 732° ± 0.1°. This value was detd. by a special extrapolation from heating curves. TeO_2 crystallizes from the melt; it is uniaxial and pos.; d. = 6.02.
V. F. Harrington





A theory of strong electrolytes. Miloslav Stehlík. *Chem. Listy* **28**, 120-3(1934). A review. S. shows that the electrostatic theory of strong electrolytes holds perfectly in very dil. solns. and that the deviations from the limiting laws in more concd. solns. cannot be considered as defects in the theory but as information revealing the functioning of other specific factors in solns. of an increasing concn.

Frank Marsh

2

Co

PROCESSES AND PROPERTIES INDEX

A STUDY OF THE PERMEABILITY OF THE [illegible] MEMBRANE. L. DYNAMICS FOR NONELECTROLYTES. B. Stehlik. Collection Czech-oslov. Chem. Communs. 9, 434-56(1937). - Curves obtained by means of a Plehla osmometer (C.A.25,5[illegible]) indicating vol. increase of soln. and, from the pure solvent to a reed membrane are analyzed theoretically. The extrapolated initial velocity of ascent of the meniscus in the capillary tube of the osmometer is for nonelectrolytes proportional to the concn. of the [illegible] its quality (being proportional to the difference in the vol. [illegible] of the membrane for both components of the soln.). After correcting for the effect of hydrostatic pressure the curves have an exponential form: the retardation of the displacement velocity of the meniscus is caused by gradual diln. of the soln. and depends on the permeability of the membrane for the solvent. When the initial hydrostatic pressure is zero the [illegible] of the exptl. curves is proportional to the concn. of the soln., whereas the time needed for attaining the max. is independent of concn. [illegible]

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

C A

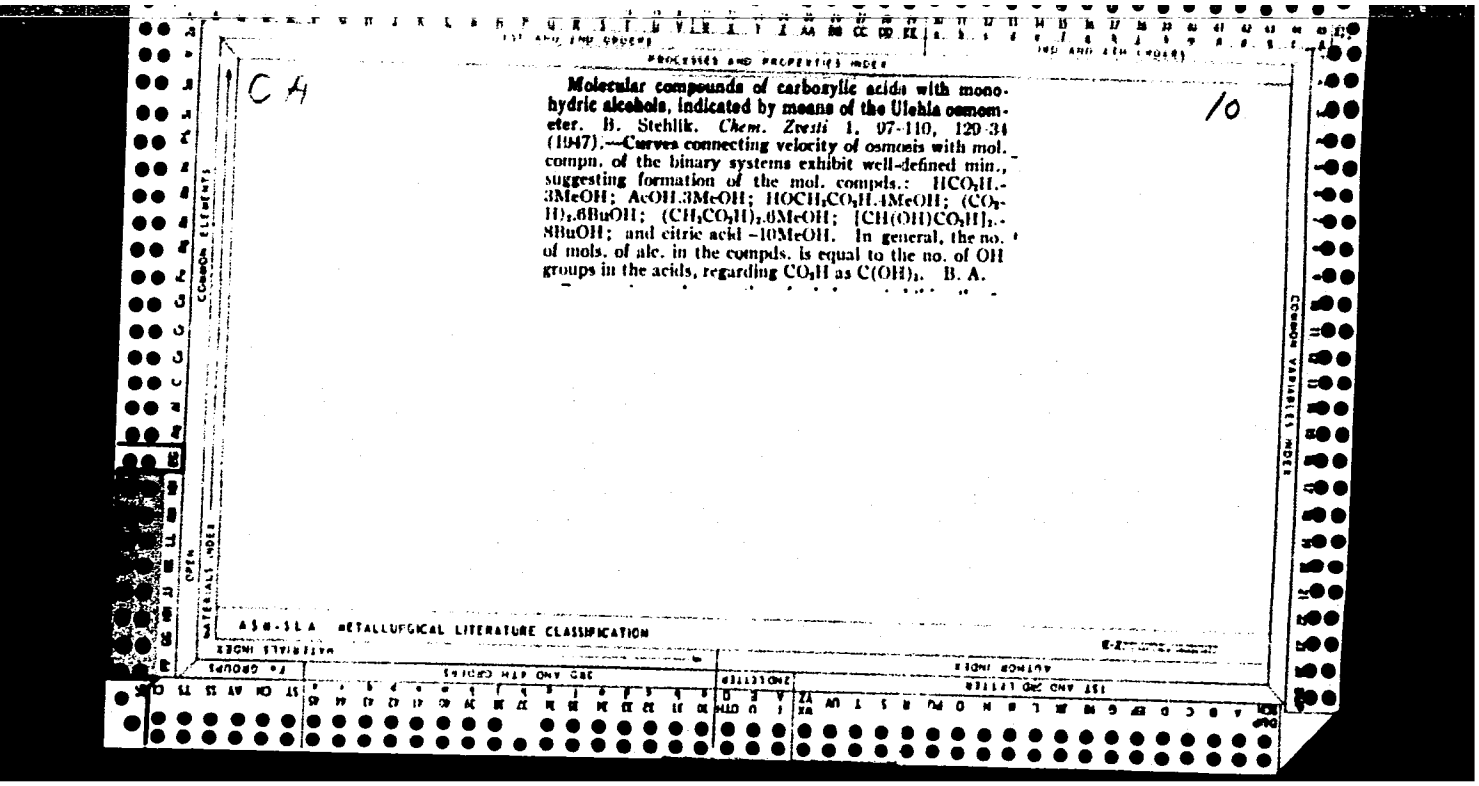
7

Potentiometric determination of $MoO_2(OH)$ in 3.5-6.3 *N* hydrochloric acid at 60°. Blahoslav Stehlík. *Chem. Listy* **38**, 13(1944).—The bluish compd. produced by reduction of Na molybdate with Zn, $SnCl_2$, Pb, or $TiCl_3$ in strongly acidic soln. can be titrated with $Ce(SO_4)_2$ or $KMnO_4$ in the presence of $MnSO_4$ if protected against air. $MoO_2(OH) + Ce^{4+} + H_2O \rightarrow MoO_4^{--} + Ce^{3+} + 3H^+$.
Milos Hudlicky

CA

2

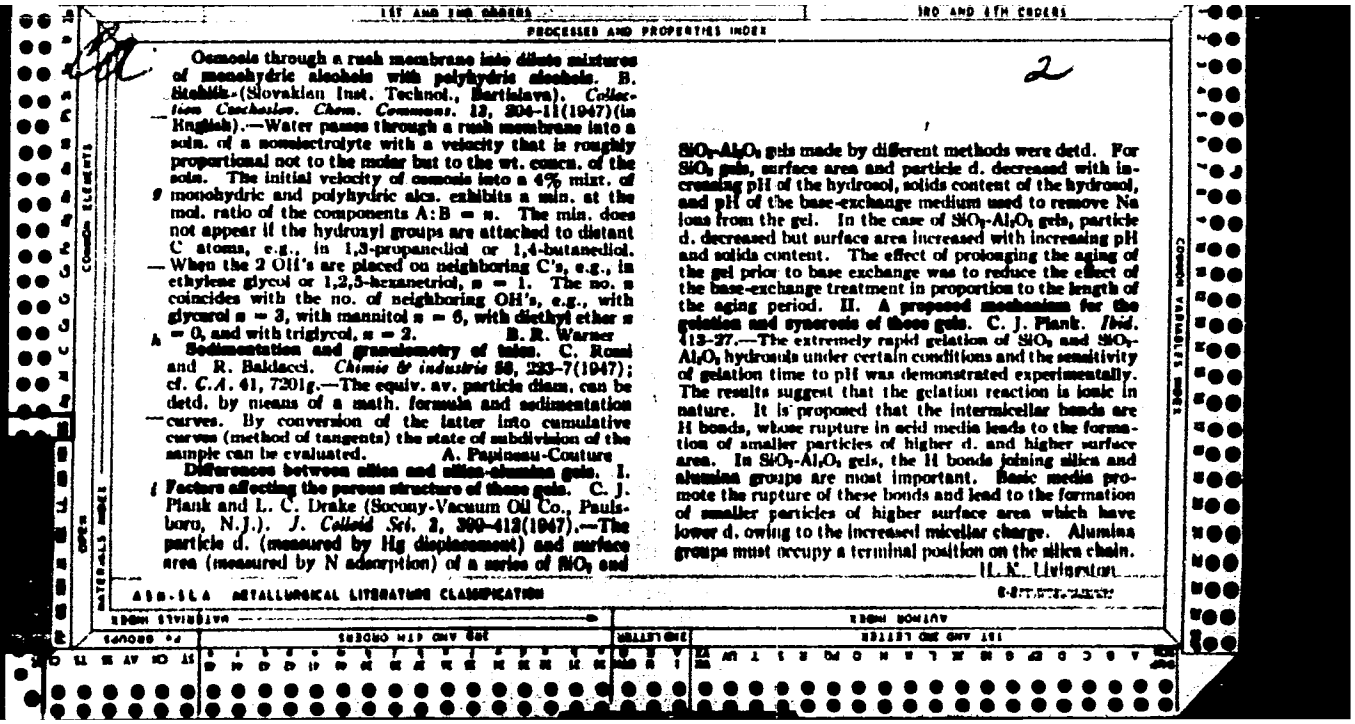
Antonín Šimek, Blahoslav Stehlík, *Chem. Listy* 40, 89-90(1946).—Obituary. M. Hudlický



CA

10

Molecular compounds of carboxylic acids with monohydric alcohols, indicated by means of the Ulehla osmometer. B. Stehlik. *Chem. Zvesti* 1, 97-110, 120-34 (1947).—Curves connecting velocity of osmosis with mol. compn. of the binary systems exhibit well-defined min., suggesting formation of the mol. compds.: $HCO_2H.3MeOH$; $AcOH.3MeOH$; $HOCH_2CO_2H.4MeOH$; $(CO_2H)_2.6BuOH$; $(CH_2CO_2H)_2.6MeOH$; $[CH(OH)CO_2H]_2.8BuOH$; and citric acid $-10MeOH$. In general, the no. of mols. of alc. in the compds. is equal to the no. of OH groups in the acids, regarding CO_2H as $C(OH)_3$. B. A.

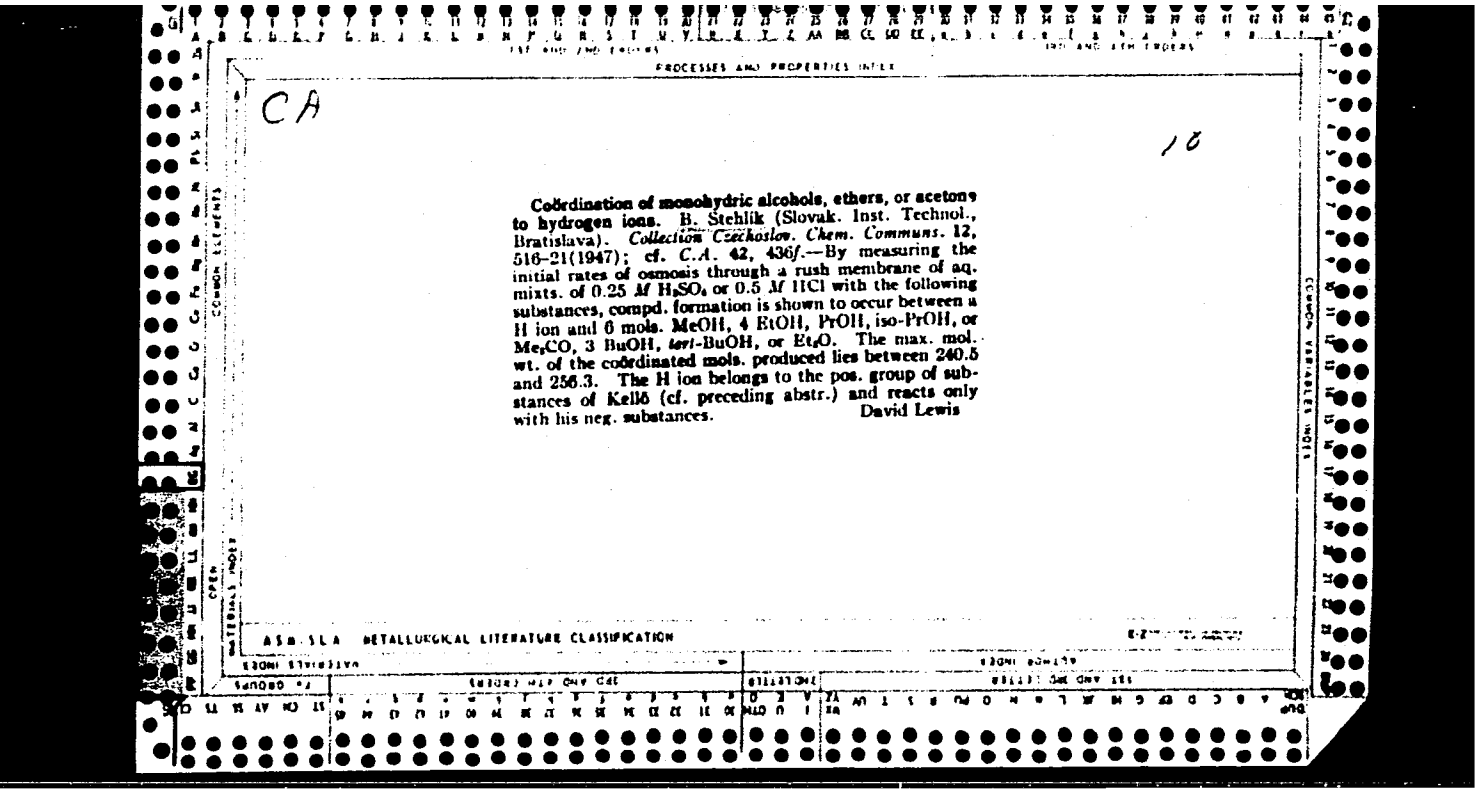


PROCESSES AND PROPERTIES INDEX

Osmosis through a rush membrane into dilute mixtures of monohydric alcohols with polyhydric alcohols. B. Stehlík.-(Slovakian Inst. Technol., Bartislava). *Collection Czechoslov. Chem. Communs.* **12**, 204–11(1947)(in English).—Water passes through a rush membrane into a soln. of a nonelectrolyte with a velocity that is roughly proportional not to the molar but to the wt. concn. of the soln. The initial velocity of osmosis into a 4% mixt. of monohydric and polyhydric alcs. exhibits a min. at the mol. ratio of the components A:B = *n*. The min. does not appear if the hydroxyl groups are attached to distant C atoms, e.g., in 1,3-propanediol or 1,4-butanediol. When the 2 OH's are placed on neighboring C's, e.g., in ethylene glycol or 1,2,5-hexanetriol, *n* = 1. The no. *n* coincides with the no. of neighboring OH's, e.g., with glycerol *n* = 3, with mannitol *n* = 6, with diethyl ether *n* = 0, and with triglycol, *n* = 2. B. R. Warner

Sedimentation and granulometry of talcs. C. Rossi and R. Baldacci. *Chimie & industrie* **58**, 233–7(1947); cf. *C.A.* **41**, 7201g.—The equiv. av. particle diam. can be detd. by means of a math. formula and sedimentation curves. By conversion of the latter into cumulative curves (method of tangents) the state of subdivision of the sample can be evaluated. A. Papineau-Couture

Differences between silica and silica-alumina gels. I. Factors affecting the porous structure of these gels. C. J. Plank and L. C. Drake (Socony-Vacuum Oil Co., Paulsboro, N.J.). *J. Colloid Sci.* **2**, 399–412(1947).—The particle d. (measured by Hg displacement) and surface area (measured by N adsorption) of a series of SiO_2 and SiO_2-Al_2O_3 gels made by different methods were detd. For SiO_2 gels, surface area and particle d. decreased with increasing pH of the hydrosol, solids content of the hydrosol, and pH of the base-exchange medium used to remove Na ions from the gel. In the case of SiO_2-Al_2O_3 gels, particle d. decreased but surface area increased with increasing pH and solids content. The effect of prolonging the aging of the gel prior to base exchange was to reduce the effect of the base-exchange treatment in proportion to the length of the aging period. II. A proposed mechanism for the gelation and syneresis of these gels. C. J. Plank. *Ibid.* 413–27.—The extremely rapid gelation of SiO_2 and SiO_2-Al_2O_3 hydrosols under certain conditions and the sensitivity of gelation time to pH was demonstrated experimentally. The results suggest that the gelation reaction is ionic in nature. It is proposed that the intermicellar bonds are H bonds, whose rupture in acid media leads to the formation of smaller particles of higher d. and higher surface area. In SiO_2-Al_2O_3 gels, the H bonds joining silica and alumina groups are most important. Basic media promote the rupture of these bonds and lead to the formation of smaller particles of higher surface area which have lower d. owing to the increased micellar charge. Alumina groups must occupy a terminal position on the silica chain. H. K. Livingston

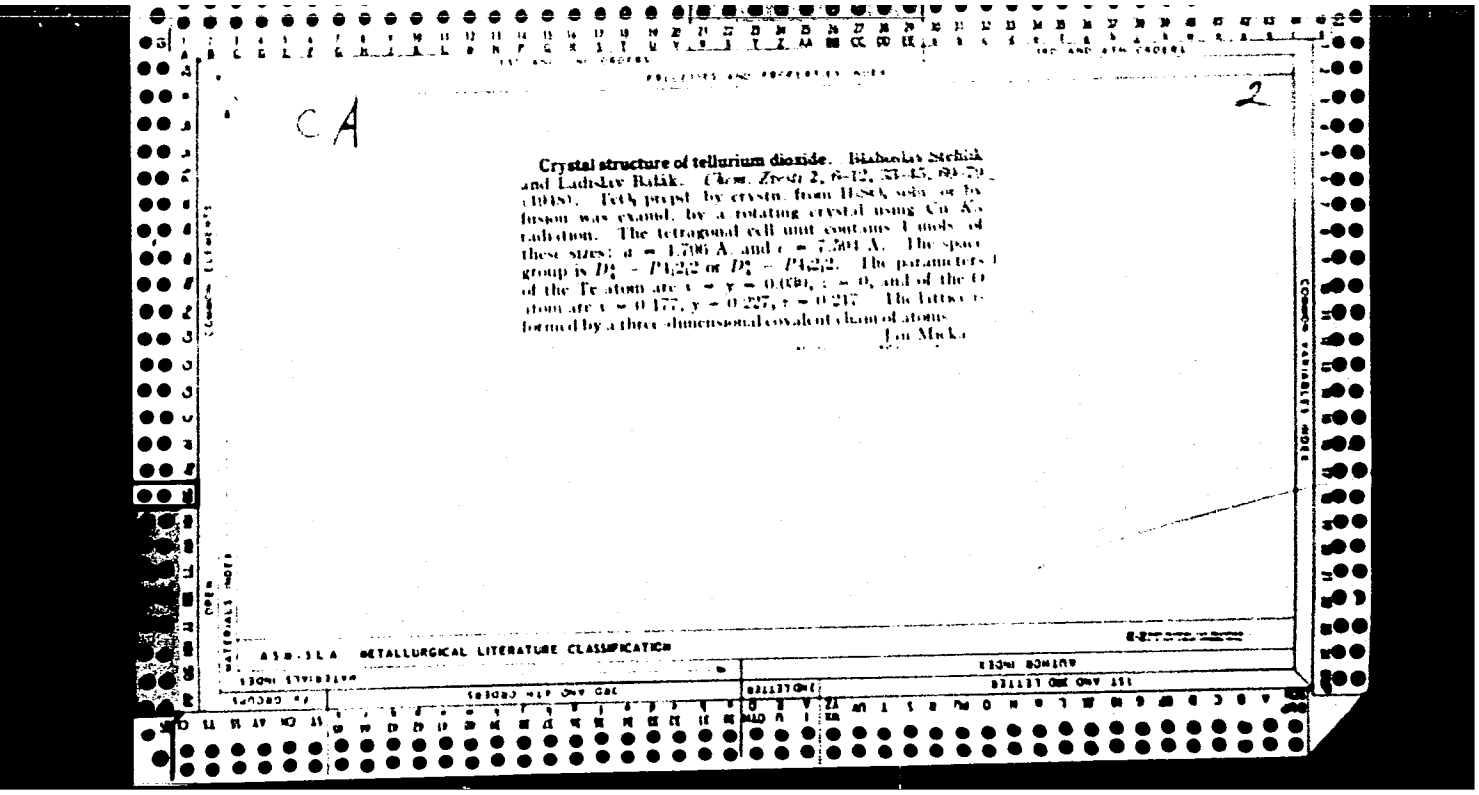


CA

10

Coördination of monohydric alcohols, ethers, or acetone to hydrogen ions. B. Stehlík (Slovak. Inst. Technol., Bratislava). *Collection Czechoslov. Chem. Communs.* 12, 516–21(1947); cf. *C.A.* 42, 436*f*.—By measuring the initial rates of osmosis through a rush membrane of aq. mixts. of 0.25 *M* H_2SO_4 or 0.5 *M* HCl with the following substances, compd. formation is shown to occur between a H ion and 6 mols. MeOH, 4 EtOH, PrOH, iso-PrOH, or Me_2CO, 3 BuOH, *tert*-BuOH, or Et_2O. The max. mol. wt. of the coördinated mols. produced lies between 240.5 and 256.3. The H ion belongs to the pos. group of substances of Kellö (cf. preceding abstr.) and reacts only with his neg. substances.

David Lewis



CA

2

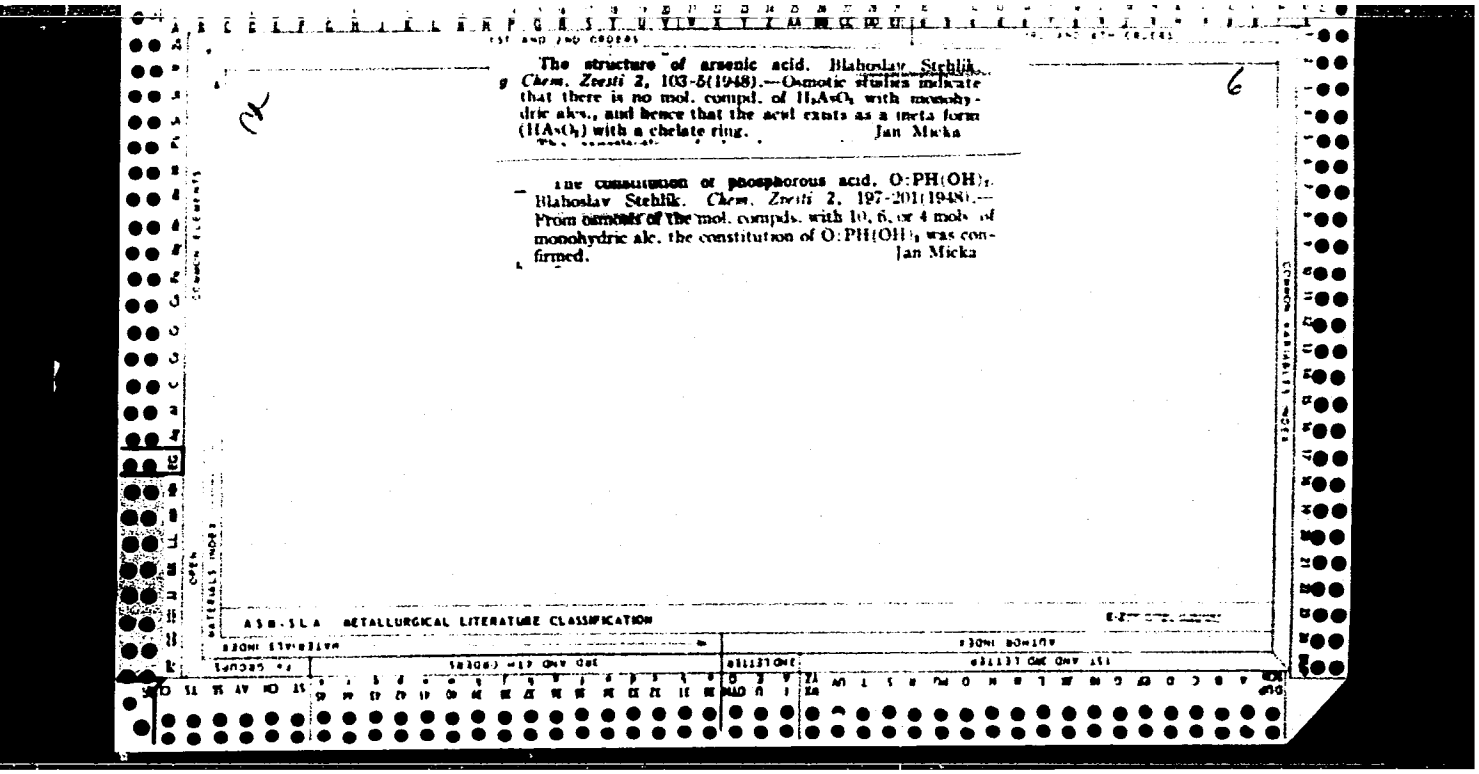
Crystal structure of tellurium dioxide. Blahoslav Stehlík and Ladislav Bulík. *Chem. Zvesti* 2, 6–12, 33–45, 69–79 (1948). TeO$_2$ prepd. by crystn. from HCl soln. or by fusion was examd. by a rotating crystal using Cu Kα radiation. The tetragonal cell unit contains 4 mols. of these sizes: $a = 4.806$ A. and $c = 7.561$ A. The space group is $D_4^4 - P4_12_12$ or $D_4^8 - P4_32_12$. The parameters of the Te atom are $x = y = 0.000$, $z = 0$, and of the O atom are $x = 0.177$, $y = 0.257$, $z = 0.217$. The lattice is formed by a three-dimensional covalent chain of atoms.

Jan Micka

A58-51A METALLURGICAL LITERATURE CLASSIFICATION

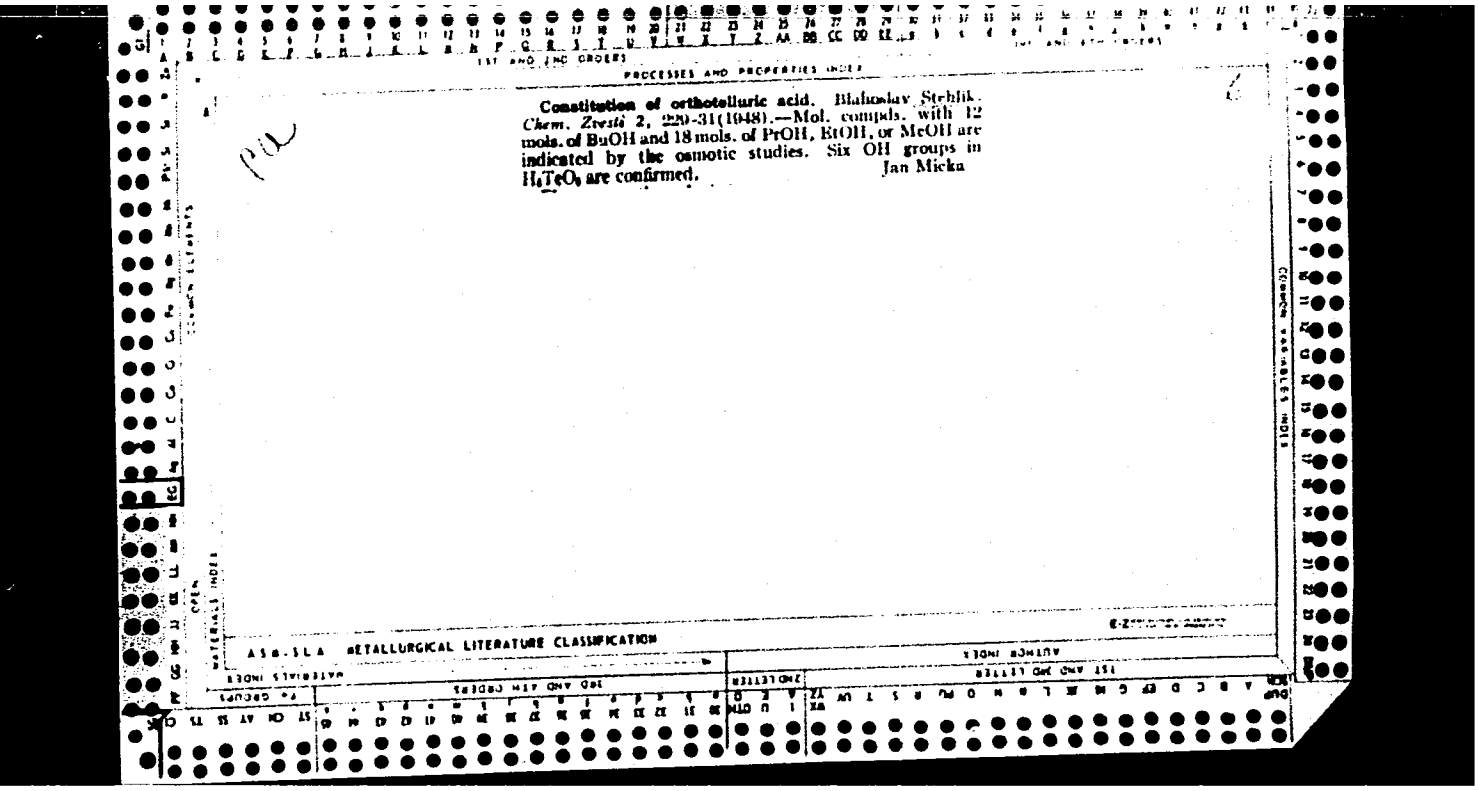
A

The coördination of monohydric alcohols to the hydrogen atom in the hemiacetal hydroxyl. Blasdale, Stehlik *Chem. Zvesti* 2, 79-81(1948). The coördination has been proven by the measurement of rates of osmosis through the Ölchla rush membrane for glucose, fructose, and maltose. The alkylene oxide form of these saccharides was confirmed. Cf. C. A. 42, 1525d. Lee Mack



The structure of arsenic acid. Blahoslav Stehlík. *Chem. Zvesti* 2, 103-5(1948).—Osmotic studies indicate that there is no mol. compd. of H_3AsO_4 with monohydric alcs., and hence that the acid exists as a meta form ($HAsO_3$) with a chelate ring. Jan Micka

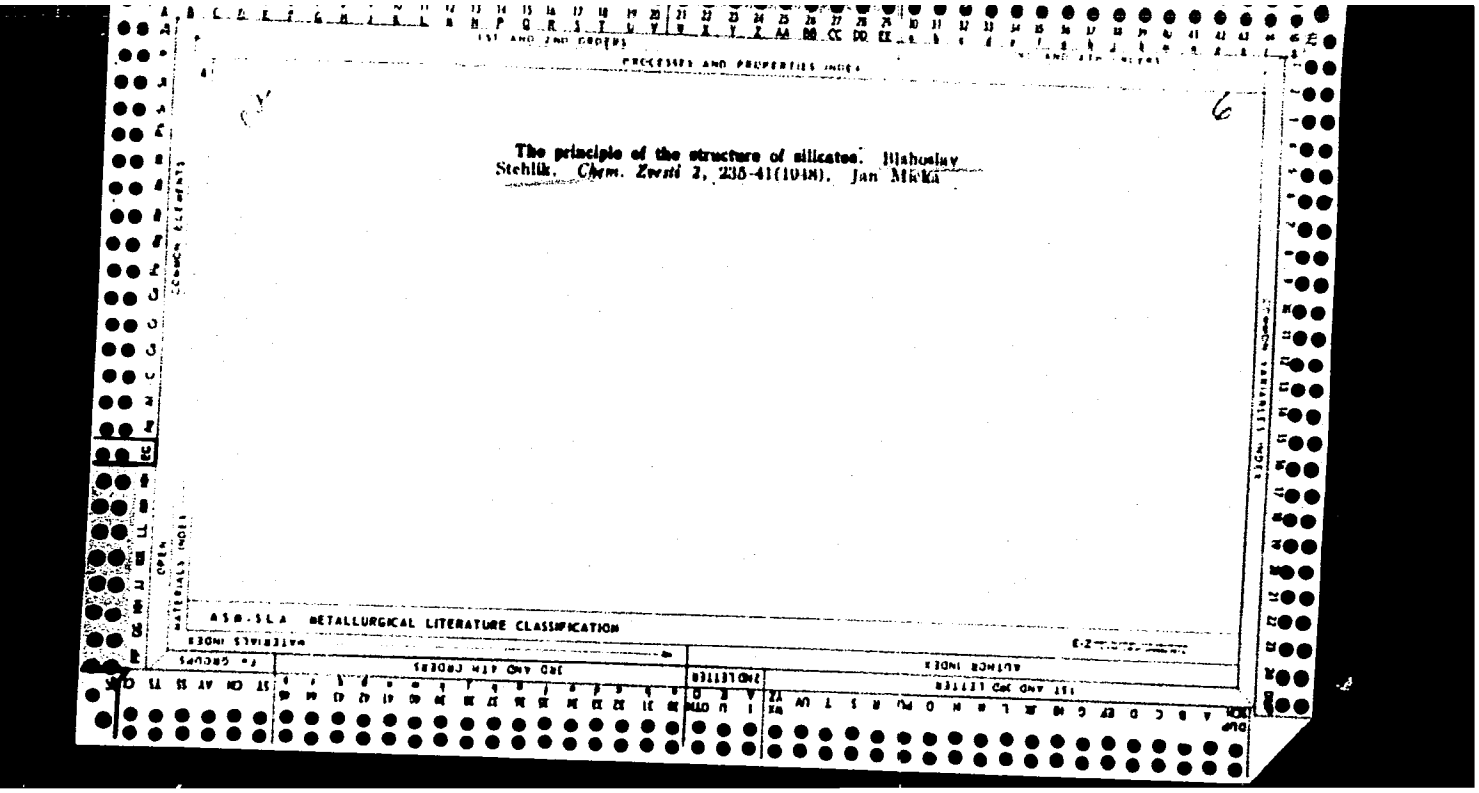
The constitution of phosphorous acid. O:PH(OH)$_2$. Blahoslav Stehlík. *Chem. Zvesti* 2, 197-201(1948).—From osmosis of the mol. compds. with 10, 6, or 4 mols. of monohydric alc. the constitution of O:PH(OH)$_2$ was confirmed. Jan Micka



PROCESSES AND PROPERTIES INDEX

Constitution of orthotelluric acid. Blahoslav Stehlík. *Chem. Zvesti* 2, 229-31(1948).—Mol. compds. with 12 mols. of BuOH and 18 mols. of PrOH, EtOH, or MeOH are indicated by the osmotic studies. Six OH groups in H_6TeO_6 are confirmed. Jan Micka

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION



The principle of the structure of silicates. Iliashuiv Stehlik. *Chem. Zvesti* 2, 238-41(1948). Jan Mikula

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

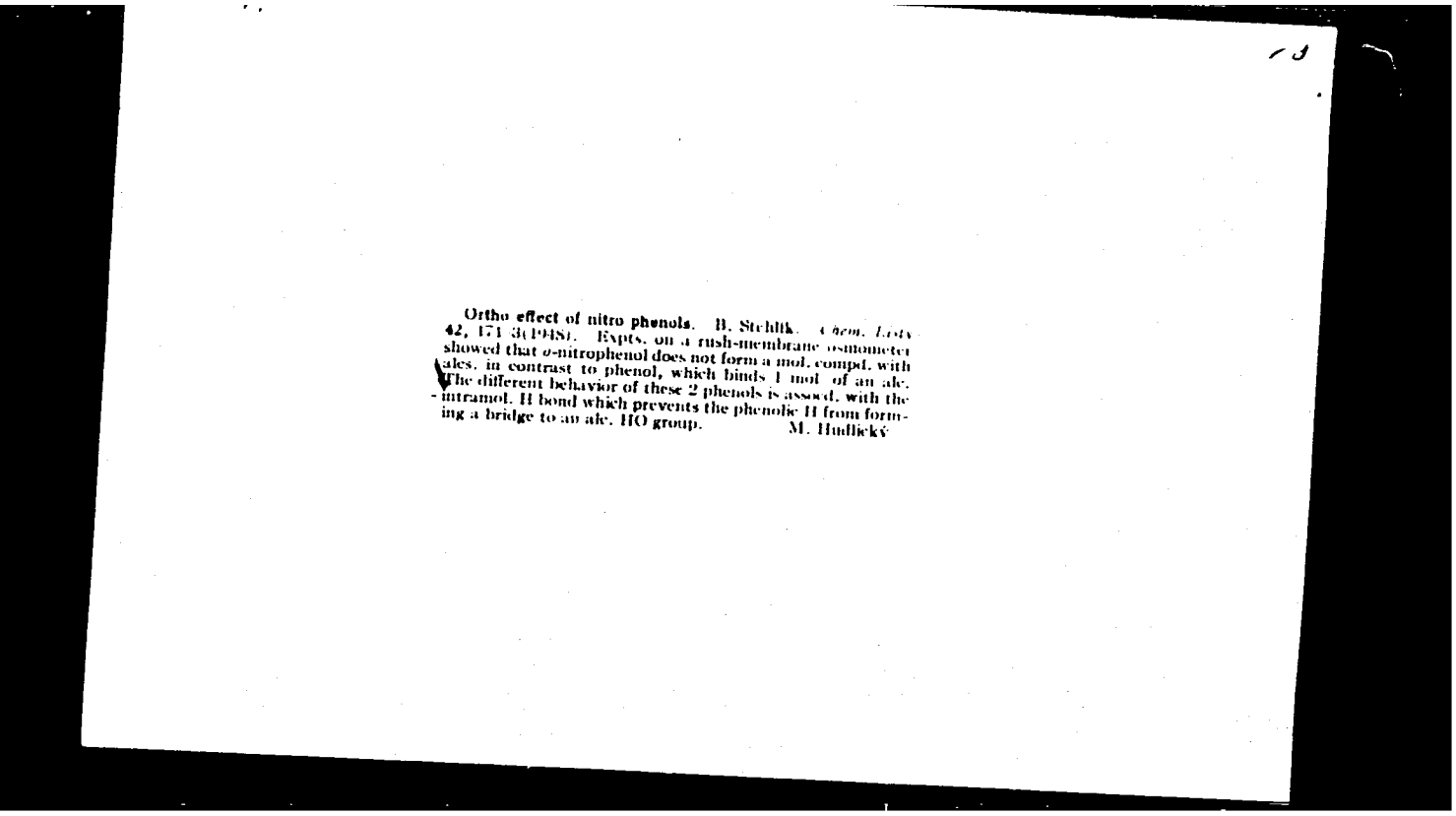
3RD AND 4TH ORDERS

CA

2

An osmotic study of ammonia. Bohuslav Stehlík. [illegible]. The result [illegible] indicates 2 mol. compds. in dil. mixts. of NH_3 and HCl: $NH_3.HCl$ and $4NH_3.HCl$. Mol. compds. of NH_4Cl with 2 butanols or 3 lower alcs. indicate that NH_4^+ is a H ion coordinated by one mol. of NH_3. Jan Micka

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION



Ortho effect of nitro phenols. B. Stehlík. *Chem. Listy* 42, 171-3(1948). Expts. on a rush-membrane osmometer showed that *o*-nitrophenol does not form a mol. compd. with ales. in contrast to phenol, which binds 1 mol. of an alc. The different behavior of these 2 phenols is assocd. with the intramol. H bond which prevents the phenolic H from forming a bridge to an alc. HO group. M. Hudlický

CA

Intramolecular bridge in pyrocatechol and hydroquinone. Blahoslav Stehlik. *Chem. Zvesti* 2, 81-4(1948). —Mol. compds. of dihydroxybenzenes with monohydric alcs. have been found by osmosis through a rush membrane, showing that there is an intramol. H bridge in pyrocatechol and hydroquinone. Jan Micka

Osmometric study of aniline. Miloslav Stehlík (Tech. Univ., Bratislava, Czech.). *Chem. Zvesti* [illegible]. By the rush-membrane method mol. compns. of 2 mols. of aniline (I) with 1 mol. of MeOH, butanol, Et_2O, or acetone are indicated. The N atom of I is connected with the O atom of the other compd. by the H_2O mol. In mixts. of I with HCl, the anomalous $(C_6H_5NH_2)_x.HCl$ was ascertained. Its rush no. $x = 4$ indicates that by the coördination of I to H ion the polarity of amine hydrogens is increased and that at the same time the H ion loses the ability to coördinate ales.

Jan Micka

C/+

10

Mesohydric tautomerism of urea. Blahoslav Stehlík and Alexander Tkáč. *Chem. Zvesti* **3**, 33-8(1949). — According to Hunter's conception of the mesohydric tautomerism (C.A. **40**, 1199[2]), by osmosis through a rush membrane, urea has been found to have the structure: $H{-}NH{-}C(:NH_2){-}O{-}H$. In a mixt. with HCl, where the unchelated N is coordinated to the H ion, the anomalous ammonium salt $[CO(NH_2)_2]_2{\cdot}HCl$ has been found.

Jan Micka

CA

Chelation of allocinnamic acid. Blahoslav Stehlík. *Chem. Zvesti* **3**, 71–6(1949).—Osmosis through the rush membrane points to a mol. compd. of $PhCH:CHCO_2H$ with 1.5 mols. butanol, which indicates that the H atom on the benzene ring in the ortho position forms a bridge to the carbonyl O.

Jan Micka

CA

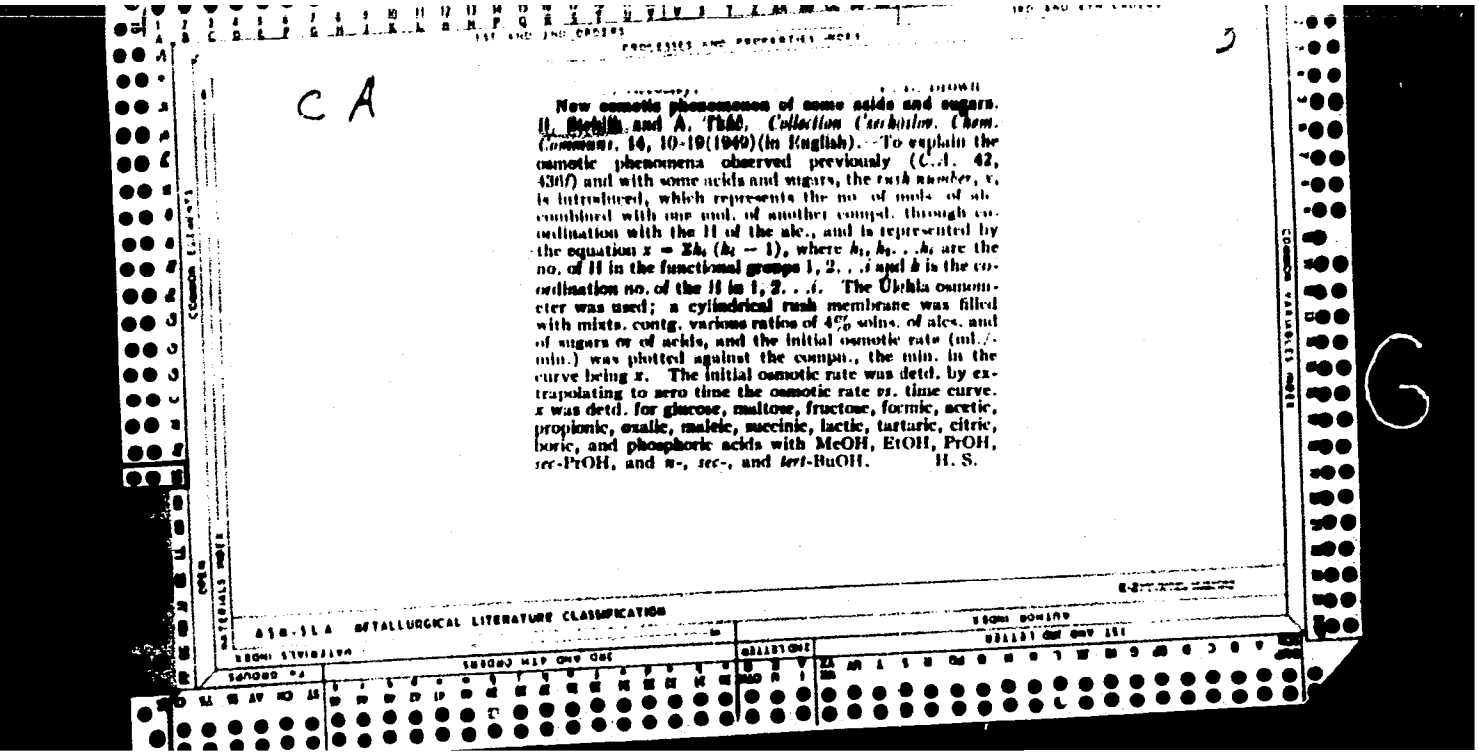
10

An osmometric study of chloroform and chloral hydrate. Blahoslav Stehlík and Alexander Tkáč (Slovak Tech. Univ., Bratislava, Czech.). *Chem. Zvesti* **3**, 164–68 (1949).—It was found by the osmometric method with a cuprush membrane (I) that the H atom of $CHCl_3$ is polar and able to form a H bridge with the O atoms of ales. and (2) that in chloral hydrate the HO groups are closed into 2 chelated rings by the bridge O—H.....Cl. J. M.

C. A.

13

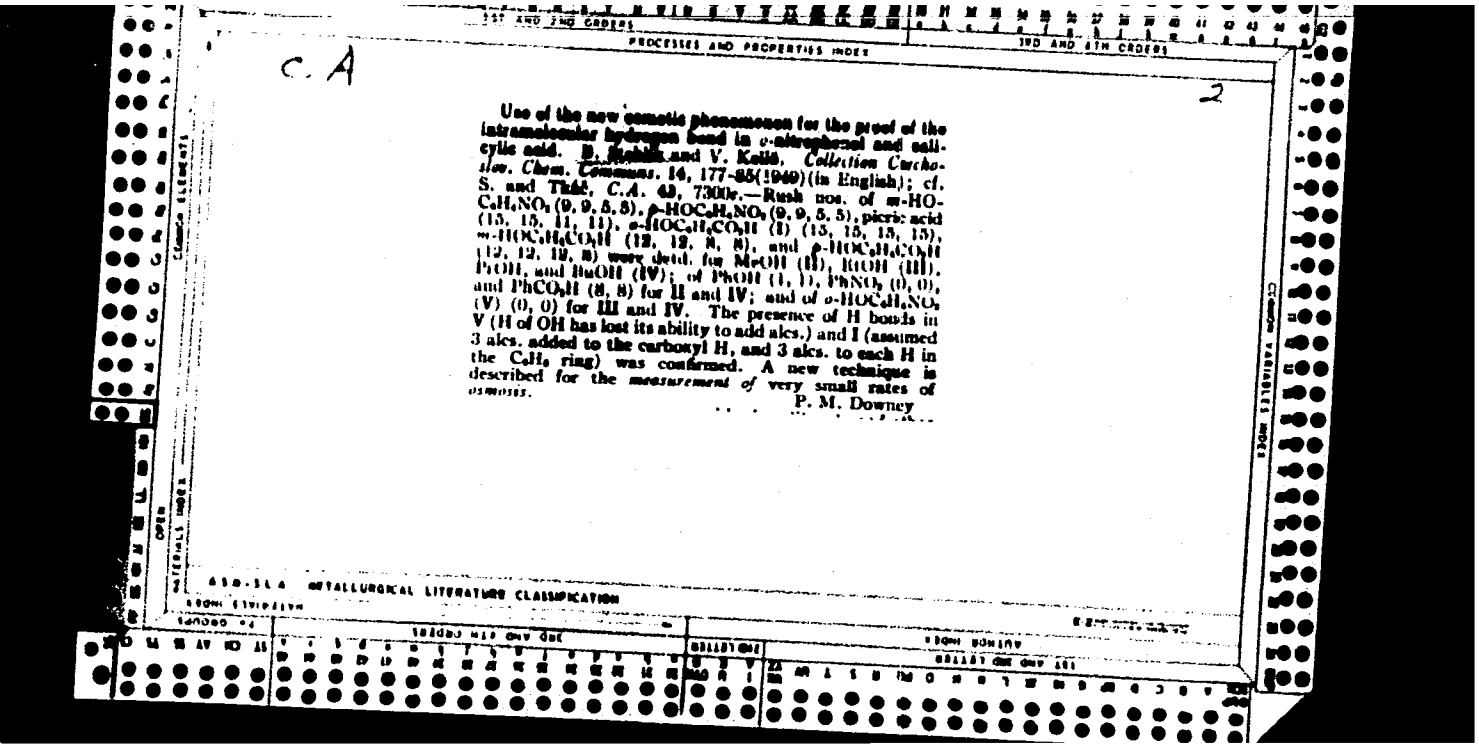
An osmometric study of alloxan and dimethylalloxan.
Blahoslav Stehlík (Slovak Tech. Univ., Bratislava, Czech.). *Chem. Zvesti* 3, 325-32(1949). By using a rush membrane the mesohydric tautomerism of alloxan has been proven. One mol. of H_2O in alloxan and dimethylalloxan is not water of crysta. but chemically bound. Two mols. dimethylalloxan in BuOH form with 2 mols. HCl an anomalous salt which is decompd. by the excess of BuOH. Jan Micka



CA

New osmotic phenomenon of some acids and sugars. H. Erbith and A. Thilé, *Collection Czechoslov. Chem. Communs.* 14, 10-19(1949)(in English). To explain the osmotic phenomena observed previously (C.A. 42, 4306*f*) and with some acids and sugars, the *rush number*, x, is introduced, which represents the no. of mols. of sb. combined with one mol. of another compd. through co-ordination with the H of the alc., and is represented by the equation $x = \Sigma h_i (h_i - 1)$, where $h_1, h_2 \ldots h_i$ are the no. of H in the functional groups 1, 2. . .*i* and *h* is the co-ordination no. of the H in 1, 2. . .*i*. The Ubbla osmometer was used; a cylindrical rush membrane was filled with mixts. contg. various ratios of 4% solns. of alcs. and of sugars or of acids, and the initial osmotic rate (ml./min.) was plotted against the compn., the min. in the curve being *x*. The initial osmotic rate was detd. by extrapolating to zero time the osmotic rate *vs.* time curve. *x* was detd. for glucose, maltose, fructose, formic, acetic, propionic, oxalic, maleic, succinic, lactic, tartaric, citric, boric, and phosphoric acids with MeOH, EtOH, PrOH, *sec*-PrOH, and *n*-, *sec*-, and *tert*-BuOH. H. S.

A58-5LA METALLURGICAL LITERATURE CLASSIFICATION



C.A

2

Use of the new osmotic phenomenon for the proof of the intramolecular hydrogen bond in *o*-nitrophenol and salicylic acid. B. Rubik and V. Kolář, *Collection Czechoslov. Chem. Communs.* 14, 177-85(1949)(in English); cf. S. and Thát, *C.A.* 43, 7300e.—Rush nos. of *m*-HOC$_6$H$_4$NO$_2$ (9, 9, 5, 5), *p*-HOC$_6$H$_4$NO$_2$ (9, 9, 5, 5), picric acid (15, 15, 11, 11), *o*-HOC$_6$H$_4$CO$_2$H (I) (15, 15, 15, 15), *m*-HOC$_6$H$_4$CO$_2$H (12, 12, 8, 8), and *p*-HOC$_6$H$_4$CO$_2$H (12, 12, 10, 8) were detd. for MeOH (II), EtOH (III), PrOH, and BuOH (IV); of PhOH (1, 1), PhNO$_2$ (0, 0), and PhCO$_2$H (8, 8) for II and IV; and of *o*-HOC$_6$H$_4$NO$_2$ (V) (0, 0) for III and IV. The presence of H bonds in V (H of OH has lost its ability to add alcs.) and I (assumed 3 alcs. added to the carboxyl H, and 3 alcs. to each H in the C$_6$H$_4$ ring) was confirmed. A new technique is described for the *measurement of* very small rates of osmosis.

P. M. Downey

CH

6

The structure of orthotelluric, phosphorous, and arsenious acids. B. Stehlik. *Collection Czechoslov. Chem. Communs.* 14, 241-7(1949)(in English).—See *C.A.* 43, 8934*g*,*h*.
E. J. C.

Crystal structure of tellurium dioxide. B. Stehlík and J. Rilák (Masaryk Univ., Brno). *Collection Czechoslov. Chem. Communs.* 14, 505–607(1949)(in English). See C. A. 43, 8781*f*.
P. E. Brand

CA

Osmometric study of ammonium chloride. B. Stehlík (Slovak Tech. Univ., Bratislava). *Collection Czechoslov. Chem. Communs.* 14, 9[illegible]-14(1949)(in English).—See *C.A.* 43, 8807g. R. M. S.

CA

2

Thermodynamic calculation of the temperature in the normal oxygen-acetylene flame. Blahoslav Stehlík (Slovak Tech. Univ., Bratislava, Czech.). *Chem. Zvesti* 4, 1-8(1950).—Schéfan's method (*Étude des flammes de soudure* (C.A. 30, 2041⁹)) of calcn. is criticized. From the new data the calcn. for the temp. of the flame is: $T = (3307 + 0.7t)$ °K., where t° is the initial temp.

Jan Micka

CA

11 2

The molecular structure of glycine and DL-alanine. Blahoslav Stehlík, Alexander Tkáč, and Nadě Lidková (Slovak Tech. Univ., Bratislava, Czech.). *Chem. Zvesti* 4, 53-9(1950).—The osmometric measurements, especially the indication of an anomalous hydrochloride, show that both glycine and DL-alanine do not have the form of the dipolar ion but the form of strong polar hydrogens of the amino group. These measurements agree with spectroscopic ones but differ in their explanations. The crystal structure is discussed. Jan Micka